Wavefront Sensing and Control

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The drive toward lightweight large apertures combined with the properties of engineering materials and packaging constraints leads toward active control of optical surfaces to initiate and maintain image quality. A number of diverse technology challenges must be met to reach this goal, and progress to date has been sustained. We anticipate an upcoming era where large spaceborne telescopes routinely image beyond the diffraction limit (wavefront errors << 1/14 wave), opening new frontiers in astrophysics, extrasolar planetary systems, and planetary reconnaissance.

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